

SPIRAL PETROGLYPHS OF THE USO MOUNTAIN IN VAYOTS DZOR REGION OF ARMENIA: SEMANTICS AND HISTORICAL AND GEOGRAPHICAL CONTEXT

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This paper is devoted to petroglyphs, a field which is insufficiently explored. Petroglyphs are not direct however contain scientifically accepted proof and base to answer questions related to ancient history, way of living and thinking of people, level of civilization and many other questions. The author base on the results of his own field study and works and viewpoints of other researchers makes conclusions. The wheel found in Lchashen on the shores of Lake Sevan, Armenia by 3000 BC, and chariots and carts of various design expressed in petroglyphs directly show the high level of advanced metallurgy. Referring to other scientific sources, including Rigvand, one of the reasons for tribes disintegration and emigration, Aryan invasions to India, the author sees the mobility of earliest people due to the wheel invention and the techniques of iron and steel manufacturing.

Key words: spiral petroglyph, Mt. Huso, cart, chariot, beginning of metallurgy, Armenia

Petroglyphs of the Armenian uplands have a claim on attention of researchers of rock art around the world. Analysis of wonderful primitive paintings cut in rock enables us to delve not so much into everyday home life and primitive housekeeping of remote ancestors of modern man as penetrate into the world of their ideas, insight and beliefs. In August 2016 the author examined petroglyphs carved on the USO (Huso) hillside 12 km to the north-west of the town of Jermuk of the Vayots Dzor region of Armenia. They were carved on basalt boulders, compactly scattered on a small sloping area, through which runs the water gully illustrated in photos №1 to №6. The area lies at height of 3043 m above sea level – is an alpine meadows zone. During examination of a monument nearby seasonal parking was observed bites for grazing flock of sheep.

The examined petroglyphs were represented by different types. The purpose of this paper is to analyze one of these petroglyphs – a spiral one with accompanying images. It should be noted that this type of petroglyphs is widespread not only in mountains of the Caucasus but also in the mountain systems of Italy [Demirkhanyan-Frolov, 1987, p. 62].

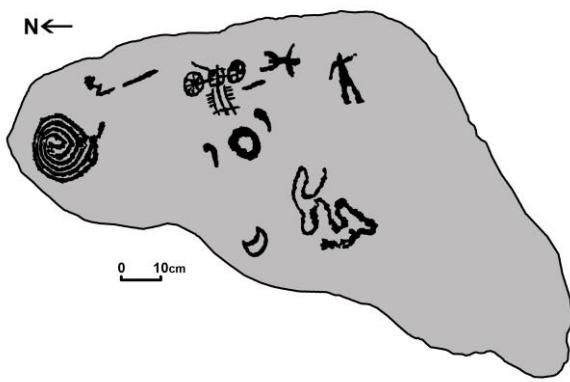


Figure 1. Cosmogonic myth on petroglyphs of mountain Uso. Painting of the composition with Petroglyph No. 4, reflecting the law of the ordered space rotation



Photo 1. Plateau with petroglyphs on the mountain slope of Uso

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Let us turn into the description of symbols considered in the work and for the sake of convenience giving them sequential numbers. The petroglyph number one is carved on a thin surface layer on a smooth stone using destruction technology without creating a relief image shown in photo №7. Its diameter is about 22 cm. The carving is spiraling counterclockwise tends to its location in the center of the stone on which there is no other petroglyphs. The number of turns of the spiral at various intervals of projections from the center ranges from three to four.

The same technique was used in making the Petroglyph №8. Next to it again there is no other image. The diameter of this Petroglyph is 14 cm. The image is spiralling counterclockwise and tends to the northern edge of the boulder. The number of the spiral turns at various intervals from the centre of projections ranges three to four.



Photo 2. Lumps of basalt on the slope of the of Uso



Photo 3. Petroglyph with the image of the Bezoar goat against the background of the water gully4

Petroglyph №3, shown in photo №9, was made differently. Because of the deepening in the stone body the turning counterclockwise spiral groove is of relief character and in its centre an image similar to snake head is seen. The diameter of the embossed image carved on the souther-eastern edge of the boulder is 10 cm. There is no other petroglyphs on the rock there. The number of spiral turns over different parts from the centre of projections ranges from four to five.

The Polygliph №4 (photo №10) also is of relief character. However unlike the petroglyph №3 here the image is not a usual one but is of double spirals wound counterclockwise. The diameter of this petroglyph is 21 cm and is carved out on the northern part of the boulder. Unlike the images we have just discussed this petroglyph is not a single, it is a part of composition of which will be discussed later using the photo №11.



Photo 4. The explorers of the expedition play backgammon on the plateau of petroglyphs



Photo 5. S.M. Shahinyan examines the "tree of life" petroglyph

Based on the above considered carving technique it is not difficult they were made in different times. The problem related to determination of the absolutely exact date of their emergence is the most difficult one. Petroglyphs of the Armenian highlands have been dated by researchers [Piotrowski, 1949; Martirosian, 1971, p.64; Demirkhanyan-Frolov, 1987; Petrosyan, 1987; Tokhatyan 2011, p.171] are ranged the Mesolithic to the Middle Ages. Sometimes here on the same surface of the rock can be seen an image left by the masters of different ages [Demirkhanyan-Frolov, 1987, p. 62].

While studying petroglyphs we have been faced by a question "What is in front of us, the naturalistic reflection of real environment or a certain sign system?" Let us agree with the opinion of those researchers who believe that petroglyphs of Armenia can not be considered solely in the context of "sketching from nature made by ancient artists." First of all, accentuated and limitedness of subjects carved on stones tell about it. For instance, in the Geghama mountain region where petroglyphs are spread there are around hundred duplicates of carved objects. At that around 50 signs repeatedly observed in Syunik, Aragats, Metsamor, and Armavir regions [Martirosyan, 1971, pp 64] are amenable to semantic interpretation and analysis. If count the total number of carved on rocks various images, then it will turn out that their 40 to 50 per cent depict mountain bezoar goats Lat. *Capra hircusaegagrus* [Shahinyan, 2010, pp 25]. Species determination as far back as was done by Vereshchagin N.K., on the material of Gobustan petroglyphs [Vereshchagin, 1981, pp 54].



Photo 6. V. V. Stepkin at large stones with petroglyphs



Photo 7. Spiral-like Petroglyph No. 1 on the Uso mountainside

Image of bezoar goats are still to be found in the area of Uso mount, as shown in photos №3, №12. Analysis of similar images found in the Armenian highlands shows the possibility to relate them to different historical periods. This phenomenon can be explained partly by the fact that petroglyphic mountain goats image styles hardly changed over time. The correlation of this thesis can be seen in other regions of Eurasia. Thus, for example, researchers involved in the analysis of images of these animals on the rocks of Uzbekistan using special computer programs have arrived at a similar conclusion [Takaki et al., 2011, pp 189].

The time factor of understanding the semantics of mountain goats image is important, but not crucial. Even in societies where primary occupation was farming and cattle-breeding over a long period of time remains of hunting religious ceremonies transfer economical basis of that stage of the society development when hunting was the main source of living [Piotrowski 1949]. Petroglyphs depicting archery are found on the slope of the USO mount.

It is noteworthy that the major zone of petroglyphs distribution in Armenia coincides with the zone of high-altitude alpine meadows (2300-3600 m), used until now as pastures. Exactly here worship to forces of nature found reflection on rock surfaces. The image of a mountain goat in this

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context is comparable to that of a bull of pasture plains, symbolizing the idea of wealth, power, fertility, associated with the cult of vegetation [Danilenko, 1999, pp15, 49].

Succulent vegetation of high-altitude Alpine meadows can not be imagined without an abundance of moisture. In all places artists of primitive era depicted water in the form of a wavy line, echoing the manner of creeping snake that at a later time found reflection in written language systems [Jensen, 1958]. Petroglyph representing water is also found in the study region of USO mountain (photo №13). It has numerous analogues in the mountains of Armenia [Martirosyan, 1971, pp 70].

"Snake, dragon, a symbol represented in almost all mythologies, on the one hand is associated with fertility, the earth, the female reproductive power, water, rain, and domestic hearth, fire (especially the heavenly one), and also the male impregnating *повор* - on the other" [Ivanov, 1991, p. 468]. In this context, we can talk about the snake as a reflection of dynamic interrelations of various natural elements: earth, water, air, fire (sun). Hence, we see widespread images of snake-dragons as symbology of the Neolith and Eneolith of Eurasia "steadily moving in a circle, and at the same time - now soars in the heavenly heights, now descends to the sphere of the earth and the underworld.



Photo 8. Spiral-like Petroglyph No. 2 on the Uso mountainside



Photo 9. Spiral-like Petroglyph No. 3 on the Uso mountainside

One would think that just in this connection graphic reproduction showed up in the course of time which for the primitive farmer was equivalent to the run of water over the earth and heaven, and in the same time equivalent to the flow of solar heat and light [Danilenko, 1999, p. 20]. In this case spontaneous-time history perfectly reflected in the spiral petroglyphs of USO mountain. At their heart folded in coils lies a snake, of which the head is particularly well seen in petroglyph №3. In this context an image of a snake is not only deeply symbolic but also naturalistic, bearing in mind that snakes rolled up their bodies in this way.

Analyzing the petroglyphs of the Armenian highlands, it is necessary to take into account that "in the zone of Alpine high-altitude meadows the objects of rock culture were created by casual people and not episodic. Petrographic culture emerged and developed in close connection with the whole culture of the Ancient world. Maps of the constellations, lunar calendars and "art galleries in the open air" were created by that most educated people of the time: scientis-priests, artists and craftsmen carving in stone "[Petrosyan, 1987].

In this context, let us try to look at the petrographic composition which is accompanied by Petroglyph №4 in the form of a double helix (Photo №11, Fig. №1). In the centre, carved on a stone composition there is a circle to which from the East moves a cart harnessed by two horses. To the North from the centre a double spiral is carved and to the South there is a snake over which there are two human figures, one is horizontal and the other –vertical. To the west of the central circle yet there is another one with the sectorial fragmentation which is not explicitly read. It can be assumed that it is the Moon over which a circle is carved – the symbol of the Sun - the eternal flow of time reflected in

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the change of seasons and the daily cycle. The cart moving from East, in the context of the solar symbolism - drawn by two horses, is "the chariot of Surya." Attention is drawn to the center of the chariot - a square divided by a cross into four parts, which may be interpreted as a symbol of the earth or the horizontal section of the median level of the world tree. "The interpretation of the world tree horizontally gives the quaternary division of the universe - the four sides of the world cardinal points. The centre is added to this as the fifth member of the ..." [Tatyana Elizarenkova, 1995, pp 476], which in the present case sredokrestiem. In this context, the two-wheel cart is the day and night sun. The sun in the daytime illuminates the vault of heaven, and at night, according to mythological representations, descends to the underworld, or moves across the vault of heaven in the opposite direction, turning to the audience its dark side. Dualism daily change may also be displayed in the number of horses. (It should be noted that a solar symbols are found on other stones of USO mountain, photo №14). Attention is drawn to the opposition in the image of a snake on the north and south sides of the stone. In the north, two snakes curled up in a spiral - the binary symbolism (day-night, light-dark, heat-cold, top-bottom, sky-earth, etc.) of the ordered space [Tatyana Elizarenkova, 1995, pp 477]. In the south, in the snake's body movement there is not harmony - the concept of chaos. At the top of the composition a man is lying and standing - death and life, an essential feature of human existence. This interpretation is stamped on the rock scene is well within the world of ideas of the ancient Aryans, reflected in the Rig-Veda and finding "their typological parallels in primitive representations of other peoples" [Tatyana Elizarenkova, 1995, pp 479]. "World Model aria Rig-Veda is space-oriented. With it everything is related, and to it all is involved. The life of a man is connected with the space with the help of Rita (rtd-) - gyre law of the universe, which is universal» [Tatyana Elizarenkova, 1995, pp 453]. Attention is concentrated on synchronism of functioning of this law, as reflected in the cosmogonic myth of the universe creation. According to it every important moment in the life of an aria was considered as a repetition of this initial process [Kuiper, 1986, pp 28.].



Photo 10. Spiral-like Petroglyph No. 4 on the Uso mountainside



Photo 11. Composition of images on a stone, including Petroglyph number 4

The origin of the universe is the prototype of the cyclic renewable renewal of life.

At that in reconstruction of the original version of the Rig-Veda cosmogonic myth two stages are distinguished: "existence of primordial world of nonsegmented unity and creation of dual world by Indra god - individualized forms from non-differentiated chaos" [Елизаренкова, 1995, с.453]. To understand the mythical deeds of Indra the following is cited from a labor of Keiper dedicated to Vedic mythology. "Indra's demiurgic act consists of two different parts, having relation to the original hill and the tree of life, respectively. The hill which is still floating on the primordial waters, should be split to the ground and opened. However, it concluded a significant resistance force. In the myth, the resistance force is personified by dragon, and Indra should, like St. George and other mythological characters, kill the dragon. It should not be forget, however, that this dragon, also called Vritra,

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represents only one particular aspect of the primordial hill - resistance that Indra has to overcome, to split up the hill. In this fight, Indra wins. He kills the dragon, and out of the hill, open it by his force, sees life in two forms - water and fire. In the myth of creation the water is represented by four rivers running down from the top of the hill in four different directions, and the fire – by the sun rising from the hill or from the water. Hill is now no longer floats. It found support (as the texts say), and begins to grow in all directions, until it reaches the size of the earth. At the same time, it remains the center of the universe and the nail that secures land to its place. As for the second part of deeds done by Indra regarding the tree of life, then Indra here is functioning as a pillar supporting the sky, lying until then on the earth. In this way he creates the duality of heaven and earth. From a mythological point of view, it is not a single event, since opposition of the sky to the earth is only one particular aspect of a comprehensive dualism. Further, when the sun rises to the sky, is born the opposition of light to darkness, in parallel to opposition of life to death "[Kuiper, 1986, pp 29-30].

In this context the petroglyphs under study receive an additional interpretation. Let us first look at the "chariot of Surya." From its center, enclosed in a square four rivers flow in opposite directions - escaped from the primordial hill. This idea found its further reflection in Hinduism, where the four rivers flow from Mount Meru, forming a horizontal cross of the earthly world and correlating four elements, four phases of the cyclical development, four ages (*yugas*).



Photo 12. Composition of petroglyphs with the image of the Bezoar goat on the Uso mountainside



Photo 13. Petroglyph in the form of a wave-like coiled body of a snake

It is noteworthy in this context that the number of turns of spirals considered here, which in most cases can be read in the context of the last unfinished fourth epoch. About to unfold during the creation of the earth and its day and night the sun can also be read in the Ri- Veda [Tatyana Elizarenkova, 1995, pp 480]. In our case, as has already been noted, it is two wheel of the cart.

Let us now turn to the interpretation of the second part of Indra's deed, which established the harmony between heaven and earth, in the context of our petroglyphs. As we already mentioned, in the south of the "chariot Surya" is a man as if lying with his arms and legs stretched out. If we raise him to a vertical position, then we will see nothing but a growing "tree of life" [Shahinyan, 2010, p.4]. At the same time, his upper part is a crown resembling the Greek or Cyrillic letter psi -Ψ, and the lower part of the tree are the roots, the inverted equivalent of the letter psi. Roots are formed as a result of the synthesis of the male and female principles, leading to the germination of seed from the earth, the earthly creation. The crown is the result of a heavenly creation, in the center of which is the sun. The image of the figure with arms raised to the sky is a symbol of life, harmony of micro and macrocosmos, the connecting link of which is man. (It is significant in this context that the Cyrillic spelling of the letter "ж", which is called "live").

Next to this figure, another one is depicted on the stone, but this time in an upright position. The human image on it as if makes a step forward: legs apart, hands swinging. In the context of the above interpretation, it can be assumed that it is the Vishnu step described in the Vedic tradition, connected in the Rig Veda with the killing of the demon dragon Vritra by Indra [Keiper, 1986, pp 104, 107]. Taking a step, Vishnu starts the forward movement through the universe. As the first step he is structures the terrestrial space, by the second step - the atmospheric, and by the third - the sky. Is not this the triple number of turns of the double spiral on that stone? The purpose of Vishnu's steps, recorded in the Rig Veda, can be summarized in one word "life". At the very moment of the dual world creation, he rose from the center like an axis between the wheels, connecting heaven and earth [Keiper, 1986, pp 102-103, 110].

It is important to note that presence in Vedic mythology the dichotomy of the creation of the upper and lower world "organizes phenomena in accordance with the directions of the countries of the world, the upper world is represented by the north and the east, and the lower one by the west and the south" [Keiper, 1986, p.42]. At that the sun is considered as the representative of the upper world, and the moon is a lower one. On the petroglyphic composition we are considering, the same pattern is observed. This allows us to say that since the application of the image to the stone, it has not changed its spatial orientation.



Photo 14. Solar symbol on the Uso mountainside

No less interesting is the very mountain location of the stone in the context of the plot struck on it. "There are clear indications of the connection of Vishnu with the mountains: he" dwells "or" stands "on the mountains; He is the ruler of the mountains. Actually, the mythological significance of mountain (or mountains!) in the mythology of Vritra is connected with the original hill "[Kuiper, 1986, p.111].

In the context of the foregoing, the mass image of mountain goats on the rocks of the Armenian plateau is also perceived in a somewhat different perspective. This animal has two key features for selecting it as a specific symbol. Firstly, its habitat range is high in the mountains, and secondly, there are two large horns bent back, representing, as it were, the beginnings of the double spiral. The reality of this association among the creators of petroglyphs is shown by such images of mountain goats, where the horns are strongly twisted in the form of spirals, which can be seen in some rock carvings [Shahinyan, 2010, p.76].

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It can be assumed that with time the meaning of the mountain goat petroglyph sending us back to the time of creation from the original hill in the dynamics of the dualistic space, could be lost. After that, the image of this animal could be reproduced only by analogy, like it was often found in folk embroideries, with respect to other mythological subjects [Rybakov, 1994, pp 471-527]. But when did the master's hand perform this rock panel? Despite all the complexity of dating, we have certain chronological reference points. The first of these is connected with the presence of Indo-Europeans in the Armenian Highlands. In accordance with the hypothesis of T.V. Gamkrelidze and V.V. Ivanov, the territory of the original ancestral home of Indo-Europeans coincided with Eastern Anatolia, the South Caucasus and Northern Mesopotamia (V-IV millennium A.D).

Hence in the first half of the III millennium BC. Indo-Iranian tribes appeared in the north of Iran, and then - through Afghanistan - the first waves of Indo-Aryan tribes moved east to north-western India. In the area of modern Punjab, through the Hindu Kush passes, the warlike tribes who called themselves arias (arya) came about in the middle of the II millennium BC. [Gamkrelidze, Ivanov, 1984; Elizarenkov, 1995, pp 426, 429].

The second chronological reference point is related to the time when among Indo-Europeans wheeled vehicles appeared. It should be noted that "all the numerous terms pertaining to wheeled transport trace back to the pre-Indo-European epoch, that is, wheeled transport, according to linguistics data, was already known to the Indo-European people before the disintegration and the beginning of their migration. If we assume the date for a pre-Indo-European community of V-IV millennium BC, then the wheeled transport should have appeared already at this time. It was the invention of wheeled vehicles that allowed mass movements to take place, which caused the collapse of Indo-European unity "[Safronov, 1989, C.157-158].

Currently, scientists, comparing the data of linguistics with archaeological material, all dates of the ancient monuments with wagons refer to the IV-III millennium BC. [Safronov, 1989, p.159, 165]. This enables to arrive at a conclusion that the composition of petroglyphs under study did not appear earlier than this time. It should be noted that the archaeological material of the North-Eastern Armenia obtained during the excavations dates the presence of wagons in the 23-21 centuries. BC, referring to the last stage of the evolution of Kuro-Araksian culture in Transcaucasia [Safronov, 1989, c.177].

From the methodological point of view, determining the age of appearance of wheeled vehicles, it should be noted that "the production of wheeled wagons implies a certain level of metallurgy, which was necessary for making of solid woodworking tools" [Gamkrelidze, Ivanov, 1984, p.717].

That is, we can talk about the appearance of petroglyphs of wheeled vehicles in the Armenian Highlands in the period not before the Eneolithic era. The most probable time for the application of these images to the cliffs dates back to the 3rd millennium BC. This conclusion is well correlated with the dating of other petroglyphs of the Armenian highland of a cosmological nature dating back to the 27th to 25th centuries. BC. [Tohatian, 2011, pp 172]. That is, we can talk about the appearance of petroglyphs of wheeled vehicles in the Armenian Highlands in the period not before the Eneolithic era. The most probable time for the application of these images to the cliffs dates back to the 3rd millennium BC. This conclusion is well correlated with the dating of other petroglyphs of the Armenian highland of a cosmological nature dating back to the 27th to 25th centuries. BC. [Tohatian, 2011, pp 172].

It can be assumed that the cosmological plot under examination was not simply connected with the reflection of the mythological concept of the world order, but also with a certain ritual that helps the forces of harmony in the images of Indra and Vishnu in the struggle against death and darkness [Keiper, 1986, p. 50]. After all in the world "everything repeats itself as it was in immemorial prescription, and following the law of rita, a person reproduces the cyclical nature of cosmic

phenomena in the cycle of the ritual, thereby maintaining order in space and in human society and creating conditions for the normal and successful life of his tribe" Elizarenkov, 1995, pp 457].

Conclusions

Noteworthy in this context is the twisting of spirals on the stones of the mountain Uso slope against the movement of the sun, counterclockwise. "What was, it will be; and what was done, it will be done, and there is nothing new under the sun "(Ecclesiastes 1: 9). Thus, the spiral petroglyphs of the Jermuk Mountains that we have discussed symbolize the universal law of the rotation of the universe reflected in myths, brought to life by the cosmological act of creation. Their creators in the Bronze Age were the tribes of the Indo-European cultural tradition, the mythological representations of which were later reflected in the Rig Veda.

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Վ.Վ. Ստեղին

Դուսական աշխարհագրական ընկերակցություն

Հոդվածը նվիրված է համեմատաբար քիչ հետազոտված բնագավառի՝ ժայռապատկերներին: Ժայռապատկերները կողմնակի, բայց գիտականորեն ընդունելի ապացույցներ են պարունակում հնագույն պատմության, մարդկանց կենցաղի, մոտածողության, քաղաքակրթության մակարդակի և բազմաթիվ այլ հարցերին պատասխանելու համար: Հեղինակը հենվելով իր կողմից հրականացրած դաշտային աշխատանքների արդյունքների և այլ գիտնականների աշխատանքների ու տեսանկետների վրա կատարում է եզրակացություններ: Հայատանում Ք.ձ.ա. 3-րդ հազարամյակում հայտնված անհվլ և նրա հիման վրա սայլերի հորինվածքների տեսականին, որոնց տիպերը արտացոլված են ժայռապատկերներում, ուղղակիորեն մատնացուց են անում զարգացած մետալուրգիայի բարձր մակարդակը: Վկայակոչելով այլ գիտական աղբյուրներ, այդ թվում և Ոհզմեռան, Հայկական բարձրավանդակում ապրած ցեղերի տրոհման, արտագաղթի և դեախ Հղկաստան արիական արշավանքների պատճառներից մեկը հեղինակը տեսնում է անհվի և մետալուրգիական տեխնոլոգիաների նվաճման արդյունքում քարի դարի մարդկանց ձեռք բերած շարժումակության մեջ:

Բանալի բառեր. պարուրածն ժայռապատկերներ, Հուսո լեռ, ձիակառք, մետալուրգիայի սկիզբ, Հայաստան

СПИРАЛЕВИДНЫЕ ПЕТРОГЛИФЫ ГОРЫ УСО В ВАЙОЦДЗОРСКОЙ ОБЛАСТИ АРМЕНИИ: СЕМАНТИКА И ИСТОРИКО-ГЕОГРАФИЧЕСКИЙ КОНТЕКСТ

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Статья посвящена сравнительно малоизученным скальным изображениям-пртроглифам, которые являются косвенными, но с научной точки зрения весьма приемлемыми доказательствами для изучения древней истории людей, об их образе жизни, мышлении, обычаях и уровне цивилизации. Опираясь на результаты как собственных полевых исследований, также и на исследований других исследователей, автор делает следующее заключение. В 3-м тысячелетии колесо и созданные различные типы телег на его основе, изображенные на петроглифах, прямо указывают на высокий уровень развития металлургии в Армении. Ссылаясь на другие научные данные, в том числе Ригведа, одной из причин распада, миграции, походов арийцев в Индию, Автор считает приобретенную высокую подвижность людей каменного века, благодаря колесу и развитию металлургических технологий.

Ключевые слова: Спиралевидные петроглифы, г. Усо, колесница, начало металлургии, Армения